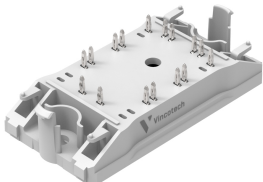
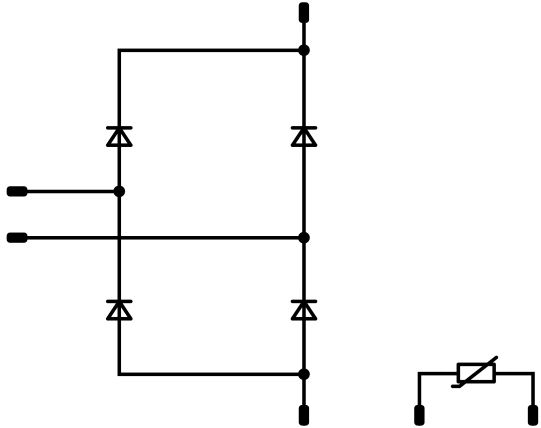




flowCON 0		1200 V / 100 A	
Features <ul style="list-style-type: none">• Single-phase Rectifier• High speed SiC Diodes• Low inductive design• Integrated thermistor		flow 0 12 mm housing 	
Target applications <ul style="list-style-type: none">• Charging Stations• Industrial Drives• Power Supply		Schematic 	
Types <ul style="list-style-type: none">• 10-PZ12ORA100RO-LH00J88Y			



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Maximum Ratings

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

Parameter	Symbol	Conditions	Value	Unit
Rectifier Diode				
Peak repetitive reverse voltage	V_{RRM}		1200	V
Forward current (DC current)	I_F	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	91	A
Surge (non-repetitive) forward current	I_{FSM}	Single Half Sine Wave, $t_p = 8,3\text{ ms}$ $T_j = 25\text{ °C}$	414	A
Total power dissipation	P_{tot}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	160	W
Maximum junction temperature	T_{jmax}		175	°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
Isolation voltage	V_{isol}	AC Voltage $t_p = 1\text{ min}$	2500	V
Creepage distance			>12,7	mm
Clearance			9,15	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				100	25 125 150		1,36 1,67 1,79	1,6 ⁽¹⁾	V
Reverse leakage current	I_R	$V_T = 1200$ V				25 150		100 800	2000	μA

Thermal

Thermal resistance junction to sink ⁽²⁾	$R_{th(j-s)}$	$\lambda_{paste} = 3,4$ W/mK (PSX)						0,59		K/W
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Thermistor

Static

Rated resistance	R					25		10		kΩ
Deviation of R_{100}	$\Delta_{R/R}$	$R_{100} = 854$ Ω				100	-3		3	%
Power dissipation	P								5	mW
Power dissipation constant	d					25		1,3	1,5	mW/K
B-value	$B_{(25/50)}$	Tol. ±1 %						3614		K
B-value	$B_{(25/100)}$	Tol. ±1 %						3650		K
Vincotech Thermistor Reference									T	

⁽¹⁾ Value at chip level

⁽²⁾ Only valid with pre-applied Vincotech thermal interface material.



Rectifier Diode Characteristics

figure 1. FWD

Typical forward characteristics

$$I_F = f(V_F)$$

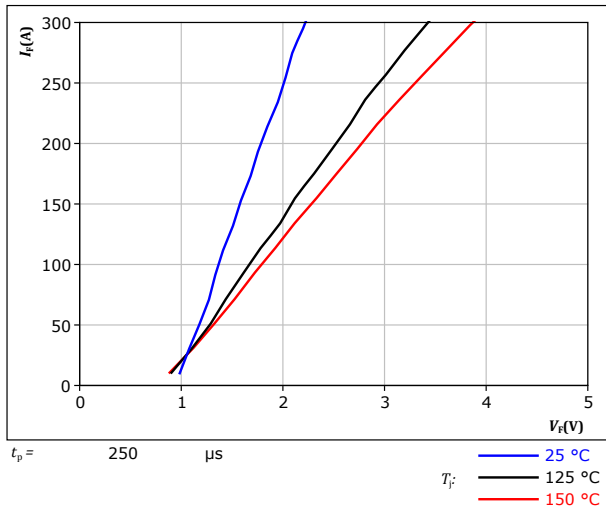
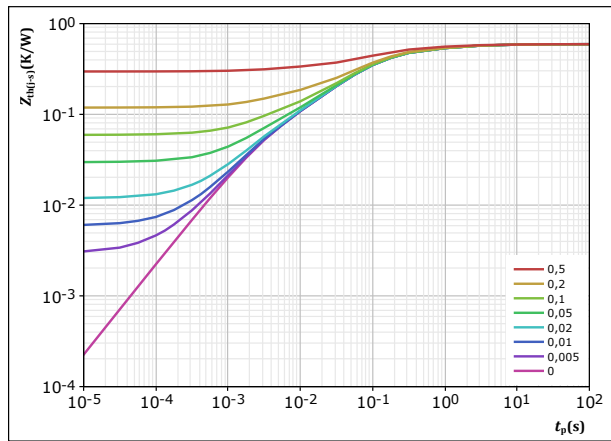


figure 2. FWD

Transient thermal impedance as a function of pulse width

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



$D = t_p / T$
 $R_{th(j-s)} = 0,594 \text{ K/W}$
 FWD thermal model values

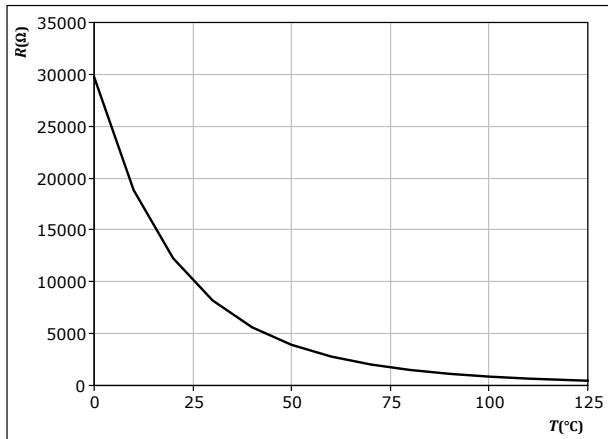
R (K/W)	τ (s)
1,56E-02	1,17E+01
8,65E-02	1,37E+00
2,61E-01	1,54E-01
1,79E-01	3,71E-02
5,13E-02	3,22E-03



Thermistor Characteristics

figure 3. Thermistor

Typical NTC characteristic as function of temperature
 $R_T = f(T)$




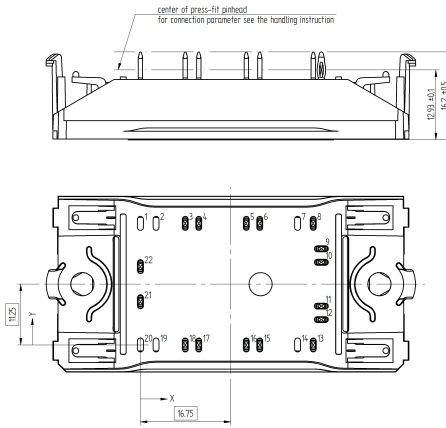


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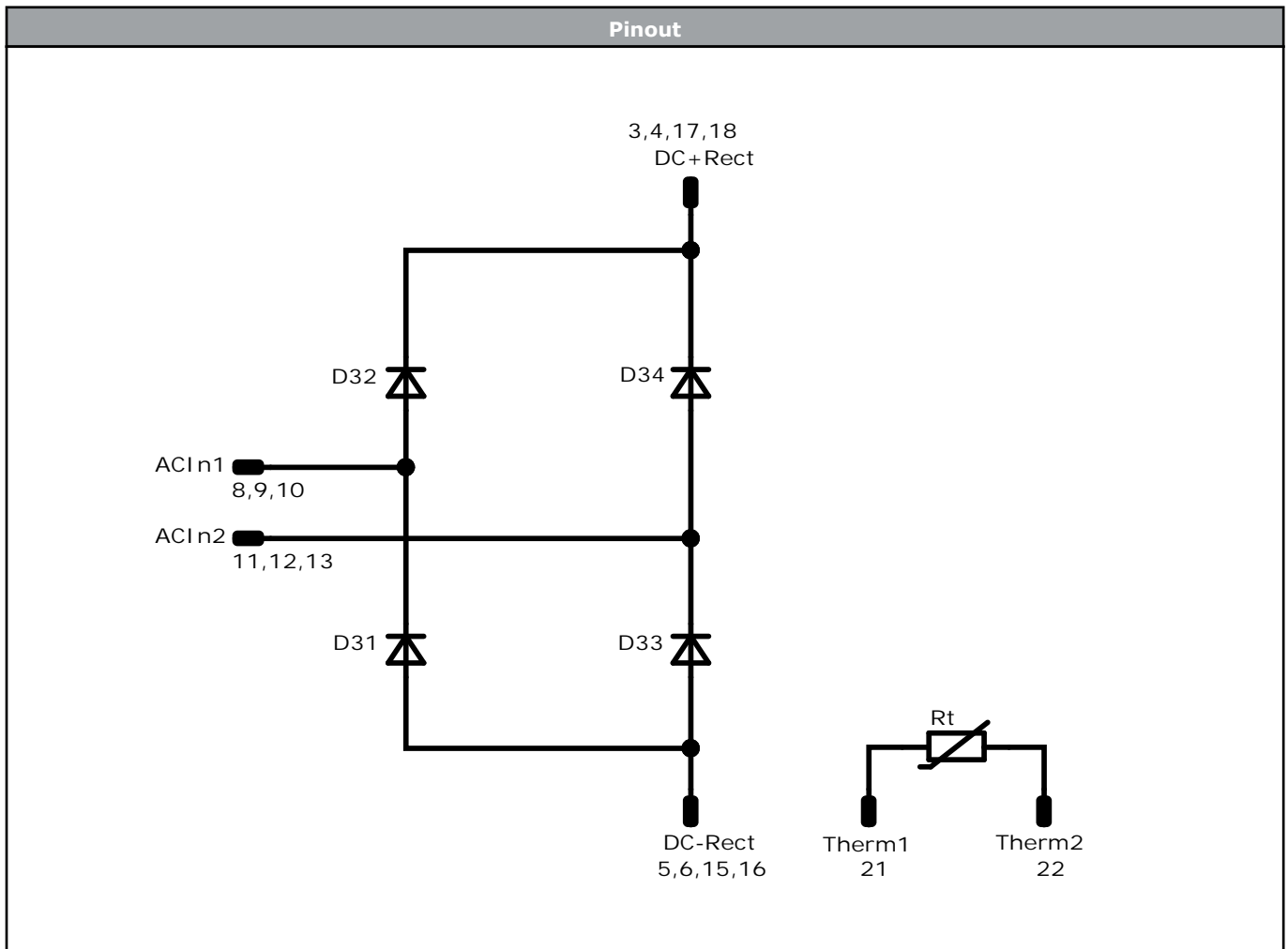
Ordering Code	
Version	Ordering Code
Without thermal paste	10-PZ12ORA100RO-LH00J88Y
With thermal paste	10-PZ12ORA100RO-LH00J88Y-/3/

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

Pin table [mm]				Outline	
Pin	X	Y	Function	 <p>center of press-fit pinhead for correction parameter see the handling instruction</p> <p>Tolerance of pinpositions: ±0.05mm at the end of pins Dimension of coordinate axis is only offset without tolerance</p>	
1			not assembled		
2			not assembled		
3	8,3	22,5	DC+Rect		
4	10,8	22,5	DC+Rect		
5	19,6	22,5	DC-Rect		
6	22,1	22,5	DC-Rect		
7			not assembled		
8	32	22,5	ACIn1		
9	33,5	17,8	ACIn1		
10	33,5	15,3	ACIn1		
11	33,5	7,2	ACIn2		
12	33,5	4,7	ACIn2		
13	32	0	ACIn2		
14			not assembled		
15	22,1	0	DC-Rect		
16	19,6	0	DC-Rect		
17	10,8	0	DC+Rect		
18	8,3	0	DC+Rect		
19			not assembled		
20			not assembled		
21	0	8	Therm1		
22	0	14,5	Therm2		



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Identification					
ID	Component	Voltage	Current	Function	Comment
D31, D32, D33, D34	FWD	1200 V	100 A	Rectifier Diode	
Rt	NTC			Thermistor	




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Packaging instruction				
Standard packaging quantity (SPQ) 135	>SPQ	Standard	<SPQ	Sample

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

Package data
Package data for <i>flow 0</i> packages see vincotech.com website.

Vincotech thermistor reference
See Vincotech thermistor reference table at 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-PZ12ORA100RO-LH00J88Y-D2-14	24 Mar. 2021	Correct Thermistor	

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