



**SERIES:** VHB200W | **DESCRIPTION:** DC-DC CONVERTER

**FEATURES**

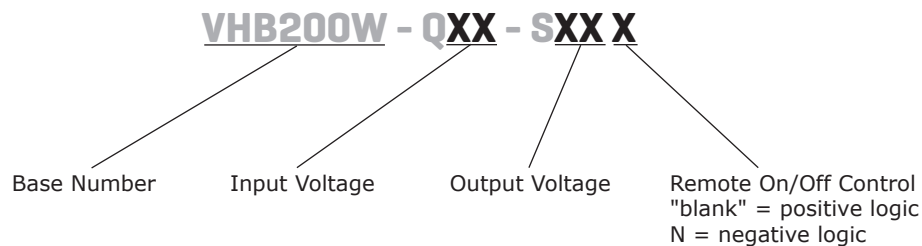
- up to 200 W isolated output
- industry standard half brick package
- 4:1 input range (10~36 V, 18~75 V)
- single output from 3.3~48 V
- 1,500 V isolation
- over current, over temperature, over voltage, and short circuit protections
- remote on/off
- efficiency up to 89%



MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise <sup>1</sup> max (mVp-p)	efficiency
						typ (%)
VHB200W-Q24-S3R3	10 ~ 36	3.3	50	165	100	87
VHB200W-Q24-S5	10 ~ 36	5	40	200	100	87
VHB200W-Q24-S12	10 ~ 36	12	16.7	200	150	86
VHB200W-Q24-S15	10 ~ 36	15	13.3	200	150	86
VHB200W-Q24-S24	10 ~ 36	24	8.3	200	240	87
VHB200W-Q24-S28	10 ~ 36	28	7.1	200	280	87
VHB200W-Q24-S48	10 ~ 36	48	4.2	200	240	86
VHB200W-Q48-S3R3	18 ~ 75	3.3	40	132	100	88
VHB200W-Q48-S5	18 ~ 75	5	40	200	100	89
VHB200W-Q48-S12	18 ~ 75	12	16.7	200	150	88
VHB200W-Q48-S15	18 ~ 75	15	13.3	200	150	88
VHB200W-Q48-S24	18 ~ 75	24	8.3	200	240	88
VHB200W-Q48-S28	18 ~ 75	28	7.1	200	280	88
VHB200W-Q48-S48	18 ~ 75	48	4.2	200	240	87

Notes: 1. ripple and noise are measured at 20 MHz BW with 10µF tantalum capacitor and 1µF ceramic capacitor across output

**PART NUMBER KEY**



## INPUT

parameter	conditions/description		min	typ	max	units
operating input voltage			10	24	36	Vdc
			18	48	75	Vdc
under voltage lockout	power up	24 V input		9.5		Vdc
		48 V input		17		Vdc
	power down	24 V input		8.5		Vdc
		48 V input		16		Vdc
positive logic remote on/off <sup>1</sup>						
filter	PI type					
Notes:	1. logic compatibility, open collector ref to -input Module ON, >3.5 Vdc or open circuit Module OFF, <1.8 Vdc					

## OUTPUT

parameter	conditions/description		min	typ	max	units
line regulation	measured from high line to low line				±0.2	%
load regulation	measured from full load to zero load				±0.2	%
voltage accuracy					±1.5	%
transient response	25% step load change				500	µs
adjustability <sup>2</sup>				±10		%
switching frequency	100% load, input voltage range			250		kHz
temperature coefficient				±0.03		%/°C
Notes:	2. trim-up: connect a resistor between the trim pin and +Sense trim-down: connect a resistor between the trim pin and -Sense					

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	%Vo	115		140	%
short circuit protection	continuous				
current limit	% nominal output current	110		150	%
thermal shutdown case temp.			110		°C

## SAFETY AND COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output	1,500			Vdc
	input to case	1,500			Vdc
	output to case	1,500			Vdc
isolation resistance		10			MΩ
isolation capacitance			1,000		pF
safety approvals	UL60950-1				
RoHS compliant	yes				

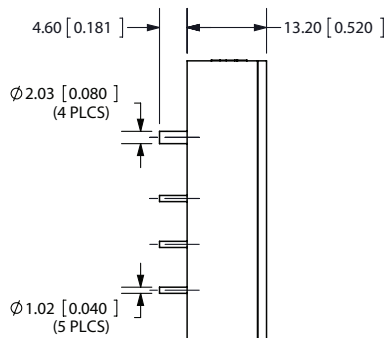
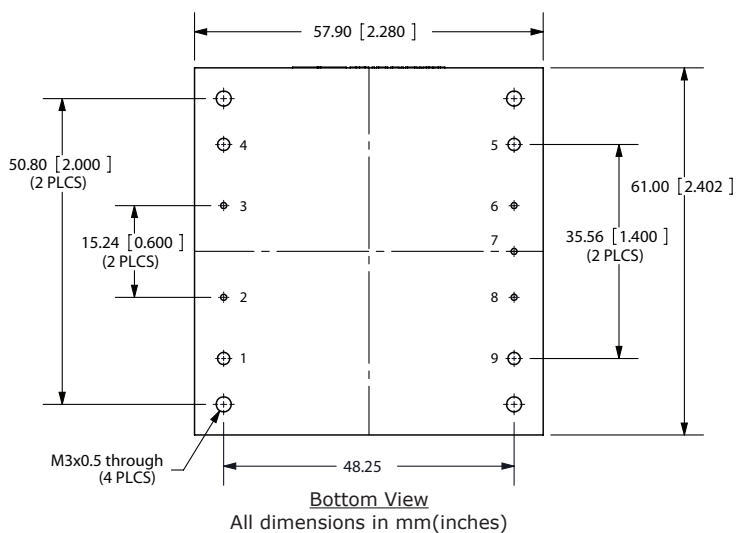
## ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
case operating temperature		-40		100	°C
storage temperature		-55		105	°C
humidity	non-condensing			95	%

## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	57.9 x 61.0 x 13.2 (2.28 x 2.40 x 0.52 inch)				mm
case material	aluminum baseplate with plastic case				
weight			114		g

## MECHANICAL DRAWING



PIN CONNECTIONS	
PIN	FUNCTION
1	+Vin
2	On/Off
3	CASE
4	-Vin
5	-Vo
6	-S
7	TRIM
8	+S
9	+Vo

Note: All specifications measured at 25°C, nominal input voltage, and full load unless otherwise noted.

## REVISION HISTORY

rev.	description	date
1.0	initial release	08/08/2008
1.01	new template applied	08/05/2011
1.02	add remote on/off control to the part number key	11/23/2011
1.03	features updated	12/20/2011
1.04	misc. updates and corrections	02/14/2012
1.05	V-Infinity branding removed	09/07/2012
1.06	updated spec	04/01/2013

The revision history provided is for informational purposes only and is believed to be accurate.



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